

TWO-PIECE BICYCLE CRANK SET

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Abstract

The present invention is a two-piece bicycle crank set comprising of
5 two monolithic, thin-wall continuous tubular members. Each tubular member
includes a crank arm and a one-half portion of a crank axle, where the crank arm
and the portion of the crank axle form a continuous thin-wall tubular shape. The
two tubular members are coupled precisely midway between two bearing sets within
a bracket shell of a bicycle. The coupling connecting the two tubular members can
10 include an outer sleeve, an inner sleeve, two exteriorly tapered and internally
threaded bushings and a threaded stud. Turning the threaded stud positions the
bushings to expand the inner sleeve, whereby the crank axle portions of the two
tubular members are secured within the inner sleeve and the outer sleeve by the
expanding inner sleeve. Alternatively, an interference fit coupling connects the two
15 tubular members, and includes a mortise member and a tenon member. The tenon
member fits into and interlocks within the mortise member to secure the first tubular
member to the second tubular member. The interference fit coupling can further
include an attachment bolt and a separation bolt to facilitate assembly and
disassembly of the coupling.

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